

Claims:

1. A method of pumping a fluid into a string of tubing suspended from a wellhead within casing in a well, comprising:

(a) closing a lower end of an elastomeric hose and pumping a fluid into the hose while the lower end of the hose is closed to create internal pressure in the hose to increase rigidity of the hose;

(b) inserting the hose through a port in a sidewall of the wellhead and causing the hose to deflect and move downward from the port into the tubing; and

(c) increasing the internal pressure in the hose to a level sufficient to cause the lower end of the hose to open, and discharging the fluid into the tubing.

2. The method according to claim 1, wherein step (a) further comprises attaching an articulated weight bar to the lower end of the hose.

3. The method according to claim 1, wherein the well contains a pump located at a lower end of the string of tubing that is rotated by a string of rods extending through the tubing to a motor assembly mounted to the wellhead; and step (b) comprises pushing the hose alongside the string of rods within the tubing.

4. The method according to claim 1, further comprising continuing to push the hose downward in the tubing while discharging the fluid out the lower end of the hose.

5. The method according to claim 1, further comprising retrieving the hose after step (c).

6. A method of cleaning debris from a string of production tubing suspended within casing in a well, wherein a rotary pump is located at a lower end of the tubing for pumping well fluid through the tubing to a wellhead at the surface, the pump being rotated by a string of rods extending through the tubing from the pump to a motor assembly at the wellhead, the wellhead having a port extending laterally therethrough that is in communication with an upper end of the tubing, the method comprising:

(a) placing a closure member on a lower end of an elastomeric hose that will open when a selected level of internal fluid pressure is applied, and pumping water into the hose to a pressure less than the selected level to increase rigidity of the hose;

(b) inserting the hose through the port and into contact with the string of rods extending upward through the tubing, the hose deflecting downward and into the tubing;

(c) pushing the hose downward in the tubing while maintaining internal fluid pressure in the tubing;

(d) at a desired depth, increasing the internal pressure in the hose to the selected level, thereby opening the closure member, and discharging water into the tubing, the water returning back up the tubing around the string of rods to the surface along with debris; then

(e) pushing the hose farther downward from the desired depth and continuing to discharge water into the tubing to further clean debris from the tubing.

7. The method according to claim 6, wherein the desired depth of step (d) occurs when the lower end of the hose ceases to move downward in the tubing.

8. The method according to claim 6, wherein step (a) further comprises attaching an articulated weight bar to the lower end of the hose.

9. The method according to claim 6, wherein step (e) comprises simultaneously discharging water out the closure member while pushing the hose downward.

10. In a well having a wellhead located at an upper end of a string of casing, a string of production tubing suspended within the casing, a rotary pump secured to a lower end of the tubing, a motor assembly mounted to the wellhead, a string of rods extending through the wellhead and the tubing from the motor assembly to the pump for rotating the pump to pump well fluid through the tubing around the string of rods to the wellhead at the surface, the

wellhead having a port extending laterally therethrough that is in fluid communication with an upper end of the tubing, the improvement comprising:

an elastomeric hose extending through the port in the wellhead and into the tubing alongside the string of rods;

an injector head connected to the port of the wellhead for gripping the hose and pushing the hose downward in the tubing;

a closure member on the lower end of the hose that will open when a selected level of internal fluid pressure to the hose is applied; and

a pump in fluid communication with an upper end of the hose for pumping fluid into the hose to stiffen the hose while being pushed by the injector head downward in the tubing and for opening the closure member and discharging the fluid into the tubing when desired.